

**REMARKS**

Claims 1-66 are pending in the application. Claims 1-68 will be pending after entry of this Amendment. Claims 1, 6-8, 14-17, 22, 24, 29, 34, 38, 40, 45, 46, 55, 56, and 60 are being amended. Support for these amendments can be found at least in FIG. 2 and on page 8 line 23 through page 9 line 10 of the Specification, as originally filed. New Claims 67 and 68 are being added. Support for these new Claims can be found at least in FIG. 2; on page 8, line 23 through page 9, line 10; and page 10, line 10 through page 11, line 19, of the Specification, as originally filed. No new matter is being introduced by way of this amendment.

Claims 1-66 stand rejected under 35 U.S.C. 102(b) as being anticipated by Yoshikawa et al. (Skewless Optical Data-Link Subsystem for Massively Parallel Processors Using 8 Gb/s X 1.1 Gb/s MMF Array Optical Module) (hereinafter "Yoshikawa").

Applicants' amended Claim 1 recites, in part:

a first de-skewing processor to overwrite the frame markers on the SONET/SDH frame with unique frame markers to aid in de-skewing the plurality of data channels and to maintain the framing pulses; a second de-skewing processor to de-skew the data from the plurality of data channels based on the unique frame markers and to restore the frame markers on the SONET/SDH frames to recover the framing pulses,

where the underlined text are elements added by way of amendment.

Briefly, Applicants' amended Claim 1 overwrites frame markers of a SONET/SDH frame with unique frame markers to delimit frame bytes, which have been mapped onto a plurality of parallel data channels. Specification, page 8 lines 22 – page 9 lines 14. Prior to being overwritten, the frame markers are used to determine when framing pulses are generated when transmitting the frame bytes of the SONET/SDH frame. *Id.* In this way, the unique frame markers, used to overwrite the frame markers, maintain the framing pulses when the frame markers and frame bytes are mapped onto the plurality of data channels. Furthermore, the unique frame markers are used to recover the framing pulses when the frame markers and frame bytes are subsequently unmapped from the plurality of data channels back onto the SONET/SDH frame. As such, Applicants' amended Claim 1 maintains and recovers framing pulses used to transmit a SONET/SDH frame, even when such a frame is transmitted and received over a plurality of parallel data channels.

In contrast, the Yoshikawa reference describes comparing when a sync pattern inserted into a slave channel is detected to when a sync pattern inserted into a master channel is detected to compensate for skew. Pages 1626, left column. In other words, absent a skew, a sync pattern inserted into a slave channel is detected at the same time as a sync pattern inserted into a master channel. Any difference in detecting the inserted sync patterns in the slave channel and the master channel indicates the presence of a skew to be compensated.

Applicants' respectfully submit that Yoshikawa's inserting sync patterns into master and slave channels so that a time difference between the channels can be determined is not the same as Applicants' overwriting frame markers with unique frame markers to maintain and recover framing pulses.

Moreover, in the Yoshikawa reference, where the sync patterns are inserted into the master and slave channels is not of significance. To Yoshikawa, the timing of when the inserted sync pattern is detected in the slave channel compared to when such a pattern is detected in the master channel is, however, of significance. As long as the sync patterns are inserted in the same location (again, where is not important) in both the master and slave channels, Yoshikawa is able to determine a difference in detection time and thus compensate for skew between the two channels.

Additionally, Yoshikawa does not need a framing pulse to transmit data, which is then de-skewed. In fact, Yoshikawa describes grouping "48 Mb/s x 100 Mb/s of parallel data...into 6 ch 8 b." Pages 1626, left column. Emphasis added. Since Yoshikawa transmits parallel data over parallel channels, there is no need to use a framing pulse to transmit and received such data. As such, it stands to reason that one skilled in the art would not be motivated by the Yoshikawa reference to maintain and recover framing pulses, as claimed by Applicants' Claim 1.

Accordingly, the Yoshikawa reference neither teaches nor provides motivation for the Applicants' amended Claim 1 ("a first de-skewing processor...to aid in de-skewing...and to maintain the framing pulses; a second de-skewing processor to de-skew...and to recover the framing pulses").

For at least the same reasons, dependent Claims 2-5 should be allowable under 35 U.S.C. 102(b) against Yoshikawa.

Independent Claims 6, 16, 17, 29, 38, 55, and 60 have similar limitations and should be allowable for the reasons presented above.

For at least the same reasons, dependent Claims 7-15, 18-28, 30-37, and 39-54, 56-59, and 61-66 should be allowable under 35 U.S.C. 102(b) over Yoshikawa.

### **Regarding New Claims**

New Claims 67 and 68 are being added. Support for these new Claims can found at least in FIG. 2; on page 8, line 23 through page 9, line 10; and page 10, line 10 through page 11, line 19, of the Specification, as originally filed. No new matter is being introduced by way of this amendment.

As argued above, Yoshikawa's inserting sync patterns into master and slave channels so that a time difference between the channels can be determined is not the same as Applicants' overwriting frame markers with unique frame markers to maintain and recover framing pulses. As such, it stands to reason that Yoshikawa does not teach the Applicants' new Claim 67 ("...a de-skewing processor to overwrite the frame markers on the SONET/SDH frame with unique frame markers to aid in de-skewing the plurality of data channels and to maintain the framing pulses..."). Applicants' new Claim 68 recites similar elements and should be allowable for at least similar reasons.

CONCLUSION

In view of the above amendments and remarks, it is believed that that all claims that will be pending after entry of this amendment, Claims 1-68 are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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